L 4397-66 EWT(1)/EWP(m)/FS(v)-3/EWA(d) GW

ACC NR: AP5026929 SOURCE CODE: UR/0373/65/000/005/0056/0059

AUTHOR: Ivanov, Yu. N. (Moscow); Vinokurov, V. A. (Moscow)

ORG: none

TITLE: Optimum motion in a central field when the operation time of a propulsion system is given

SOURCE: AN SSSR. Izvestiya. Mekhanika, no. 5, 1965, 56-59

TOPIC TAGS: optimum orbit transfer, power limited propulsion system, optimum control, boundary value problem

ABSTRACT: The variational problem of the optimum transfer of a spacecraft with a power-limited propulsion system between two circular orbits in a central field is solved under the assumption that the propulsion system is ideally controllable and its time of operation, which is smaller than the time of motion, is given. The optimization problem consists in deriving control functions for transferring the maximum useful load between two circular orbits. Mathematically, this problem requires minimization of the performace integral

$$J = \int_0^T a^2\,dt, \qquad (1)$$

where a^2dt is the thrust acceleration subject to constraints imposed by the equa-

Card 1/2

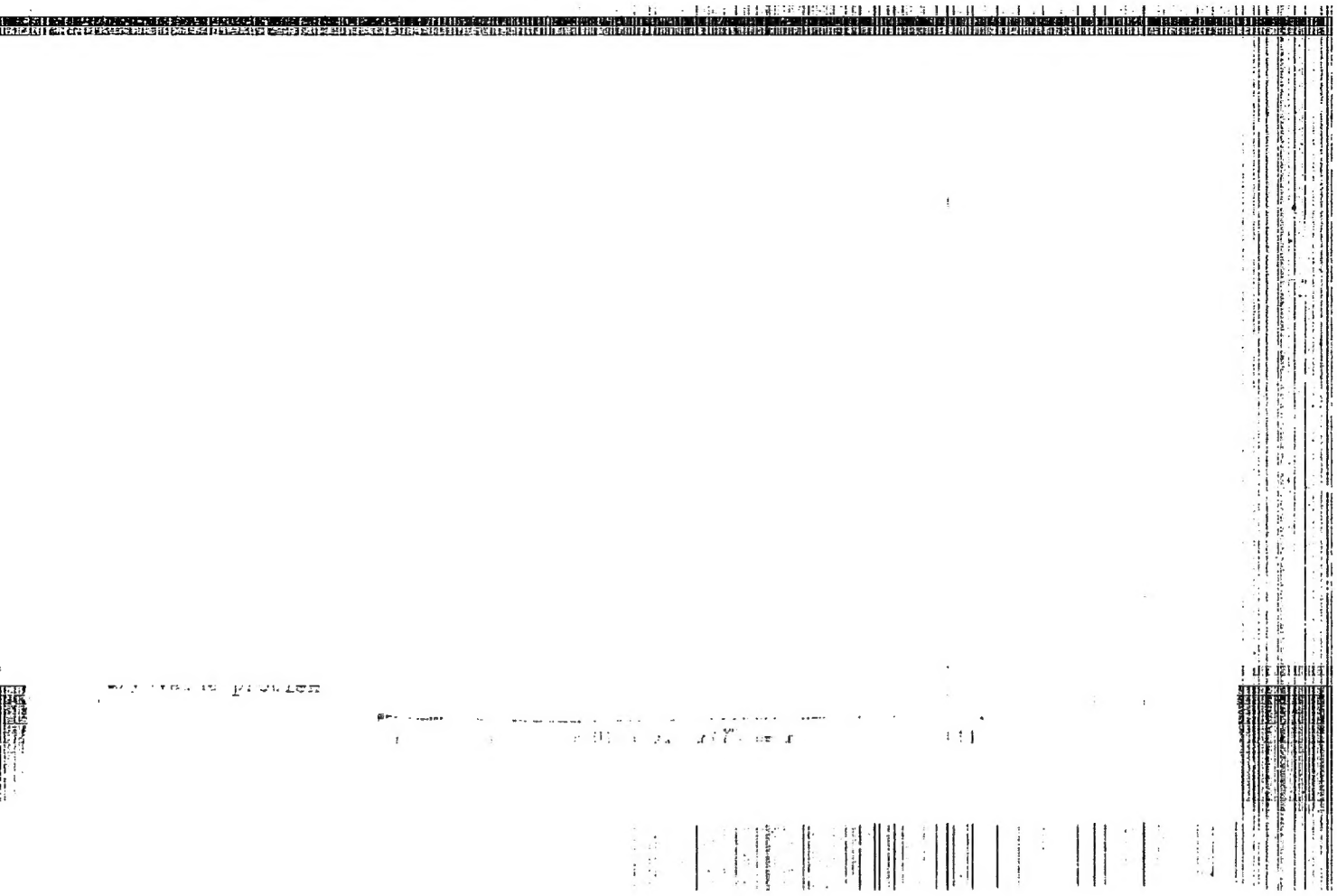
L 4397-66

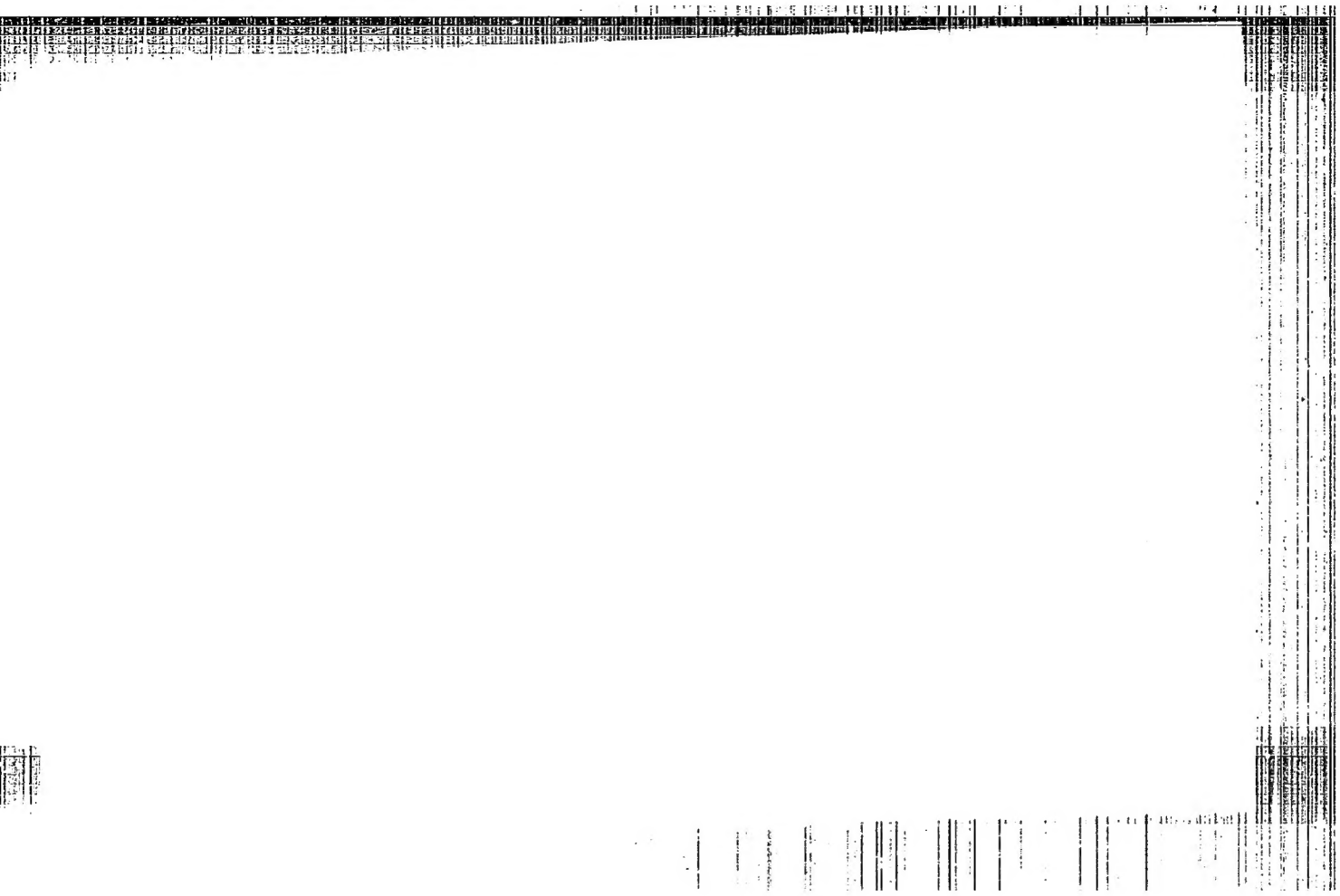
ACC NR: AP5026929

tions of motion. To solve the variational problem, a relay function $\delta(t)$ is introduced which assumes the value 1 when the propulsion system is switched on and 0 when the propulsion is shut off. To determine the optimum control functions $a(t)$, $\vartheta(t)$ (ϑ is the angle of the thrust vector with the 0 x-axis) and $\delta(t)$, the Hamiltonian is formed which then serves as the basis on which the variational problem is reduced to solving a boundary-value problem for ordinary differential equations. The method for solving the boundary-value problem is described and calculation results for one particular case are presented. Orig. art. has: 3 figures and 12 formulas. [LK]

SUB CODE: PR, SV/ SUBM DATE: 28Jul64/ ORIG REF: 001/ OTH REF: 000/ ATD PRESS: 4126

Card 2/2





APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619210014-7"

ACC NR: AR6029290 SOURCE CODE: UR/0313/66/000/006/0023/0023

AUTHOR: Grodzovskiy, G. L.; Ivanov, Yu. N.; Tokarev, V. V.

TITLE: Problems of optimization in the mechanics of cosmic flight with low thrust

SOURCE: Ref. zh. Issledovaniye kosmicheskogo prostranstva, Abs. 6.62.180

REF SOURCE: Tr. II Vses. s"yezda po teor. i prikl. mekhan., 1964. Obz. dokl. Vyp. I. M., Nauka, 1965, 181-197

TOPIC TAGS: mars flight, space flight, trajectory optimization, optimum trajectory, optimal control, thrust optimization, solar sail, jet engine, thrust to weight ratio, thrust vector control

ABSTRACT: The optimization problem is reviewed as one of selecting the optimum weight characteristics for the vehicle, the optimum engine control, and the optimum trajectory. Considered as engines are the solar sail and the electrical jet engine of limited power. Two optimization problems are suggested for solution with respect to these latter: (1) calculation of optimum relationship of weights of power source and working substance, and (2) calculation of the optimum trajectory and the program for controlling the thrust vector. Examples of calculations for an earth-Mars flight are cited. Bibliography of 54 titles. V. Ponomarev. [Translation of abstract]

SUB CODE: 22

Card 1/1

Ivanov, Yu. N.

IVANOV, Yu.N.; SERGIYEVSKIY, M.V.

Conference of Volga Valley physiologists, biochemists, and pharmacologists with the participation of morphologists and clinicians. Vop.med.khim. 3 no.5:395-396 S-O '57. (MIRA 10:12)
(BIOCHEMISTRY)

IVANOV, Yu. V., Cand Med Sci--(diss) "Conditioned reflex activity of dogs with a changed receptor system upon increase in carbon dioxide and oxygen content in inhaled air." Kuybyshev, 1958. 14 pp (Kuybyshev State Med Inst), 230 copies (KL,26-58,116)

IVANOV, Yu. N.

SERGIYEVSKIY, M.V.; IVANOV, Yu.N.

Patterns of respiratory reactions to carbon dioxide in dogs with modified receptor systems [with summary in English]. Fiziol.zhur. 44 no.2:126-133 F '58. (MIRA 11:5)

1. Kafedra normal'noy fiziologii Meditsinskogo instituta, Kuybyshev.
(RESPIRATION, physiol.
response of dogs with modified sensory receptor systems to carbon dioxide inhalation (Rus)
(BRAIN, physiol.
eff. of modified sensory receptor system in resp. response of dogs to carbon dioxide inhalation (Rus)

SIROTININ, N.N., MERKULOVA, N.A., PESKOV, B.Ya., IVANOV, Yu.N.

Mikhail Vasil'evich Sergievskii; on his 60th birthday and 32nd year of his scientific, pedagogical, and social activities. Fiziol.zhur. 44 no.11:1095-1096 N'58 (MIRA 11:12)
(SERGIEVSKII, MIKHAIL VASIL'EVICH, 1898-)

IVANOV, Yu.N.

Providing better medical personnel for the sector system is an urgent task of public health agencies. Zdrav.Ros.Feder. 2 no.4: 22-25 Ap '58. (MIRA 11:4)

1. Zamestitel' zaveduyushchego Moskovskim gorodskim otdelom zdravookhraneniya.
(MOSCOW--PUBLIC HEALTH)

IVANOV, Yu.N. (Moskva)

Advances in the organization of the public health system in the Roumanian People's Republic. Sov.med. 22 no.6:135-141 Je '58 (MIRA 11:9)

(PUBLIC HEALTH
in Roumania (Rus))

UKYUPOV, Yu.S.; IVANOV, Yu.N.; GUSEVA, Ye.N.; KAZAKOV, P.M.

Professor Mikhail Vasil'evich Sergievskii. Kaz.-med.zhur. 40 no.2:92-94 Mr-Ap '59. (MIRA 12:11)
(SERGIEVSKII, MIKHAIL VASIL'EVICH, 1898-)

SERGIYEVSKIY, M.V.; IVANOV, Yu.N.

Problems in the physiology of respiration and circulation. Fiziol. zhur. 45 no.11:1404-1406 N '59. (MIRA 13:5)
(BLOOD CIRCULATION physiol.)
(RESPIRATION physiol.)

SERGIYEVSKIY, M.V.; IVANOV, Yu.N.

On some collections of works on physiology recently published by regional institutions. Fiziol.zhur. 45 no.12:1509-1512 D '59.
(MIRA 13:4)

1. Kafedra normal'noy fiziologii Meditsinskogo instituta, Kuybyshev.
(PHYSIOLOGY)

IVANOV, Yu. M.; OKUNEVA, T. M. (Kuybyshev)

O sravnitel'noy chuvstvitel'nosti razlichnykh otdelov nervnoy sistemy (v tom chisle setevidnoy formatsii) k deystviyu gumoral'nykh razdrazhiteley dykhaniya

report submitted for the First Moscow Conference on Reticular Formation, Moscow, 22-26 March 1960.

IVANOV, Yu.E.

Interprovince conference on matters relating to medical personnel.
Zdrav.Ros.Feder. 4 no.2:50-51 F '60. (MIRA 13:5)
(MEDICAL PERSONNEL)

IVANOV, Yu.N.

Ways of searching for untapped resources among medical staffs.
Zdrav. Ros. Feder. 4 no.6:3-6 Je '60. (MIRA 13:9)

1. Nachal'nik Upravleniya kadrov Ministerstva zdravookhraneniya RSFSR.

(MEDICAL PERSONNEL)

IVANOV, Yu.N.

Change in the bioelectric activity of the various segments of the brain in cats and dogs under the influence of carbon dioxide gas. Fiziol. zhur. 48 no.3:279-289 Mr '62. (MIRA 15:4)

1. Gruppa AMN SSSR, Kuybyshev.
(ELECTROENCEPHALOGRAPHY) (CARBON DIOXIDE--PHYSIOLOGICAL EFFECT)

SERGIYEVSKIY, M.V.; IVANOV, Yu.N.

Problem of sleep. (Experiments on animals deprived of three pairs of distance receptors). Fiziol.zhur. 48 no.6:646-653 Je '62. (MIRA 15:8)

1. From the Department of Physiology, Medical Institute, Kuybyshev.
(SLEEP) (RECEPTORS (NEUROLOGY))

ACC NR: AT6036569 SOURCE CODE: UR/0000/66/000/000/0179/0181

27

AUTHOR: Ivanov, Yu. N.

ORG: none

TITLE: Dynamics of changes in respiration, circulation, and blood under the combined effect of an altered gas medium and functional central nervous system deafferentation [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 179-181

TOPIC TAGS: hyperoxia, blood oxygen saturation, space physiology, pulmonary ventilation, neurophysiology, central nervous system, respiratory system

ABSTRACT: The paper presents a summary of findings on the combined effects of an altered gas medium and various degrees of deafferentation.

Dogs whose peripheral ends of distance analyzers (sight, hearing, olfactory sense) have been blocked show a sharp decline in the sensitivity of respiratory reactions and a disruption in the gradualness of response to the effect of small (up to 5%) concentrations of CO_2.

In surgically altered animals, a clearly defined retardation of biopo-

Card 1/4

tential is registered at the brain end of the injured analyzers, and the reaction of the appropriate zones of the cerebral cortex to the effect of CO_2 is noticeably weakened. Changes in sensitivity of the brain stem, however, were not found.

Preliminary or simultaneous respiration with a gas mixture containing about 40% oxygen increases the sensitivity of intact (and especially the decerebrated) dogs to CO_2.

Intact animals, upon inhaling a gas mixture containing 2--5% CO_2, easily developed conditioned respiratory reflexes to the entire complex of experimental conditions. This was not true of surgically altered animals.

If the carotid arteries (which had been externalized in a fold of skin in the neck) of intact animals are clamped for 5 min a marked increase in pulmonary ventilation, an increase in the pulse rate (by 4--15 beats/min), and an increase in general arterial pressure (by 10--20 mm Hg) result. An examination of the blood shows a marked erythropenia and leukocytosis, and a drop in the sedimentation rate. Incomplete deafferentation (complete blocking of sight and incomplete blocking of hearing and the olfactory sense) leads to a weakening of the indicated adaptive reaction. Additional de-

afferentation resulted in still further weakening of respiratory circulatory, and hematological reactions. In a series of cases, paradoxical (nongraduated) changes in the indices in question were observed.

A small (0.5--1%) increase in saturation of the blood by oxygen can be observed in quietly resting intact dogs shortly prior to motor reactions. This warning reaction is absent in dogs which had been deprived of visual, auditory, and olfactory receptors.

An increase in the saturation of blood by oxygen (0.5--1%) can also be observed in sleeping intact animals before they are fully awake. As in the former case, this reaction is often absent in deafferentiated dogs. Surgically altered animals in deep sleep show a progressive drop in the saturation of the blood by oxygen (down to 90--86%).

Thus, the data obtained in various experiments indicate that deafferentation of the central nervous system and the consequent changes in the functional condition of the cerebral cortex invariably lead to a drop in the sensitivity of respiratory reactions, blood pressure, saturation of the blood by oxygen, and reactions of the blood to the action of an altered gas medium.

L 10950-67

ACC NR: AT6036569

O

Under these conditions it is possible to assume the appearance of basic disruptions in the activity of integrating neuromechanisms, primarily on the level of the cerebral cortex. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 4/4 bpp

ARTEMOV, G.A., inzh.; VOLKOV, R.V., inzh.; IVANOV, Yu.N., inzh.

Increasing the life of gear-driven pumps. Sudostroenie 25 no.7:25-26 Jl '59. (MIRA 12:12)
(Pumping machinery)

S/194/62/000/004/056/105
D295/D308

AUTHOR: Gafanovich, V. S. and Ivanov, Yu. N.

TITLE: The matching of high-power titanate radiators with the output of a high-frequency generator

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 4, 1962, abstract 4-5-32r (V sb. Primeneniye ul'traakust. k issled. veshchestva. no. 14, M., 1961, 301-307)

TEXT: For the matching of a generator with radiators of barium-titanate ceramic, it is suggested to use an inductive coupling between resonant circuits, one of which is connected to the anode circuit of the valve generator, and in the other the radiator itself is included. In this connection it is not recommended to take radiators with a large surface; preference is given to less powerful radiators connected in series or series-parallel groups. [Abstracter's note: Complete translation.]

Card 1/1

BOSYY, B.N., inzh.; IVANOV, Yu.N., inzh.

Optical check of the coaxiability of rotor supports of a gas-turbine engine. Mashinostroenie no.3:84-86 My-Je '62. (MIRA 15:7)

(Optical instruments) (Gas turbines--Testing)

ZVYAGINTSEV, A.F.; IVANOV, Yu.N.; KAZAKOV, V.E.; STETSENKO, A.M.; SOLOMOVICH, M.Ya.; KORZH, V.I.; DASHKEVICH, A.A.; Prinimali uchastiye: LIPTSEN, S.Kh.; RYZHIKOV, A.P.; STAL'NOKRITSKIY, V.N.; LEVENETS, L.Ye.; MOGILA, V.A.; KOVAL', A.A.; VLASOV, V.F.; ROSHCHIN, A.G.; RAYKO, V.P.; KORNIYENKO, V.G.; PANTYUSHKIN, N.V.

Investigating the possibility of manufacturing all-rolled electric locomotive wheels with existing equipment. Kuz.-shtam. proizv. 5 no.11:11-14 N '63.

(MIRA 17:1)

L 14465-66

ACC NR: AP6002975 (N) SOURCE CODE: UR/0286/65/000/024/0149/0149

INVENTOR: Volkov, R. V.; Ivanov, Yu. N.

ORG: none

TITLE: A device for centering an engine. Class 65, No. 177295

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 149

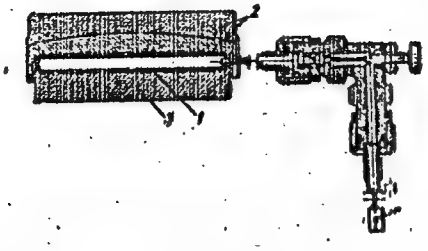
TOPIC TAGS: marine engine, marine equipment, shipbuilding engineering

ABSTRACT: This Author's Certificate introduces a device for centering an engine during mounting in the substructure of a ship. The unit includes a pressure attachment located between the engine base and the ship substructure. The device is designed for increased accuracy in centering, facilitating the balancing process and moving the engine during mounting. The pressure attachment is made in the form of a closed elastic tank filled with a liquid and fixed between spherical cushions which press against the engine frame and a removable cushion which presses against the substructure of the ship.

Card 1/2 UDC: 629.12.002.72 621.4

L 14465-66

ACC NR: AP6002975



1 - closed elastic tank; 2 - spherical cushions; 3 - removable cushion.

SUB CODE: 13/ SUBM DATE: 29May64

OC

Card 2/2

PETUKHOVA, G.A.; IVANOV, Yu.N.

Study of bathometers for sampling suspended sediment under conditions of a reservoir. Trudy GGI no.124:102-110 '65.
(MIRA 18:9)

SVIRIN, Ivan Petrovich; IVANOV, Yuriy Nikolayevich; KARLOV, A.Ya., red.; SHLEPINA, M.M., red.; GOLICHENKOVA, A.A., tekhn.red.

[How they build in Magnitogorsk] Tak stroiat v Magnitogorske. Izd-vo VTsSPS, 1958. 44 p. (MIRA 12:6)
(Magnitogorsk--Building)

ANOKHIN, Grigoriy Aleksandrovich, inzh.; IVANOV, Yuriy Nikolayevich, inzh.; SHELYANSKIY, V.A., red.; KORNEYEVA, V.I., tekhn. red.

[Masonry and home furnace construction] Kamennye i pechnye raboty; posobie dlia uchashchikhsia IX-XI klassov sel'skoi srednei shkoly. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR, 1961. 231 p. (MIRA 15:2)
(Masonry) (Furnaces, Heating)

IVANOV, Yu.N.

Studying the sedimentation of Kayrakum Reservoir. Trudy GGI no.90: 123-149 '60. (MIRA 14:1)
(Kayrakum Reservoir—Reservoir sedimentation)

IVANOV, Yu.N. (Petropavlovsk-Kamchatskiy)

Hot springs. Zdorov'e 5 no.3:32 Mr '59. (MIRA 12:3)
(KAMCHATKA--SPRINGS)

IVANOV, Yu.N.

Study of the soils of the Kayrakum Reservoir. Trudy GGI no.98: 182-202 '62. (MIRA 15:12)
(Kayrakum Reservoir—Reservoir sedimentation)

PROSVIROV, Ye.S.; IVANOV, Yu.N.

Charming Portuguese man-of-war (Physalia pelagica); venomous animals in the tropical waters of the Atlantic. Priroda 51 no.1:112-114 Ja '62. (MIRA 15:1)

1. Baltiyskiy nauchno-issledovatel'skiy institut rybnogo khozyaystva i okeanografii, Kaliningrad.
(Atlantic Ocean--Siphonophora)

IVANOV, Yuriy Nikolayevich (1928-); STROYEV, A., red.; LYASNIKOVA, L., tekhn. red.

[Atlantic cruise] Atlanticheskii reis. Moskva, "Molodaia gvardiia," 1963. 223 p. (MIRA:16-12)
(Atlantic Ocean—Marine biology)

BIGKYEVA, D.A.; IVANOV, Yu.N.

Temperature balance of Kayrakum Reservoir in 1959. Trudy Inst. zool. i paraz. AN Tadzh. SSR no.26:18-24 '63 (MIRA 17:3)

1. Kayrak-Kumskaya gidrometeorologicheskaya observatoriya, Sredneaziatskaya ekspeditsiya Gosudarstvennogo gidrologicheskogo instituta.

L 32086-66
ACC NR: AT6016434 (N) SOURCE CODE: UR/2648/65/000/021/0034/0046

AUTHOR: Ivanov, Yu. N.

15
B+1

ORG: none

TITLE: Prediction of the movement of slush ice in the Amu-Dar'ya River from Dargan-Ata to the river's mouth

SOURCE: Tashkent. Sredneaziatskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut. Trudy, no. 21 (36), 1965. Voprosy gidrologii (Problems in hydrology), 34-46

TOPIC TAGS: river ice, hydrology, mathematic prediction

ABSTRACT: The article deals with the examination of P. M. Mashukov's method for predicting the dates of slush-ice appearance in the Amu-Dar'ya River and recommendations for applying the method to the Amu-Dar'ya River from Dargan-Ata to its mouth. Orig. art. has: 2 figures, 12 formulas, and 11 tables. [Based on author's abstract] [NT]

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 003

Card 1/1 BLG

ACC NR: AT6033949 SOURCE CODE: UR/0294/66/004/005/0606/0610

AUTHOR: Golubev, V. A.; Ivanov, Yu. N. (Moscow)

ORG: none (Moscow)

TITLE: Investigation of the radiating ability of argon at high temperatures and pressures

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 5, 1966, 606-610

TOPIC TAGS: argon, emissivity, temperature dependence, pressure effect, radiation intensity, arc discharge

ABSTRACT: The authors describe equipment, a procedure, and results of an experimental investigation of the radiating ability of argon heated in a dc arc to 11 000 - 12 000K at pressures $p \approx 5 \times 10^5 - 10^7$ N/m^2. The apparatus (Fig. 1) and the test procedures are described. The absolute intensity of the argon-arc radiation was measured by comparison with a standard source (tungsten lamp), the spectrum of which was photographed on the same plate as that of the argon. The results show that with increasing pressure and current the total radiation energy of the argon increases in spite of a slight decrease in the diameter of the arc at approximately constant temperature on the discharge axis. This indicates that the degree of blackness of the argon increases with pressure. Comparison of the experimental data with the theoretical calculations shows satisfactory agreement. The authors thank G. N. Abramovich, Yu. V. Moskvin, V. D. Klimkin, A. V. Shelin, V. M. Ladygina, and B. A. Kozlenko for valuable advice

Card 1/2 UDC: 537.562

ACC NR: AP6033949

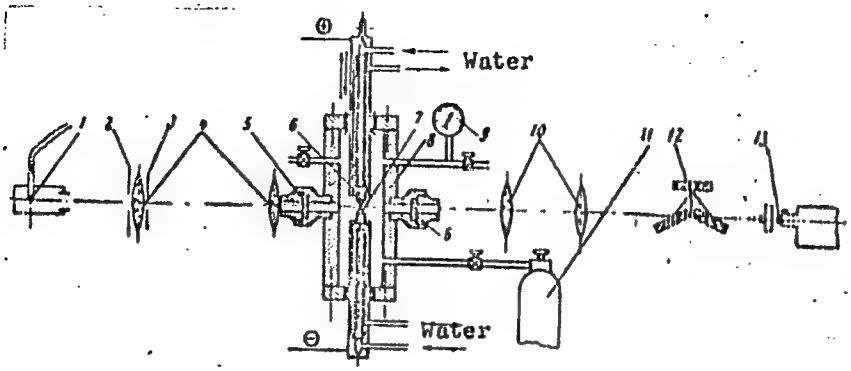


Fig. 1. Diagram of apparatus. 1 - Pyrometer, 2,3 - diaphragms, 4 - quartz lens, 5 - quartz window, 6,7 - electrodes, 8 - high-pressure chamber, 9 - manometer, 10 - quartz condenser, 11 - argon flask, 12 - mirror system, 13 - spectrograph

and help with the work. Orig. art. has: 5 figures and 3 formulas.

SUB CODE: 20/ SUBM DATE: 11Jun65/ ORIG REF: 010/ OTH REF: 006

Card 2/2

ACC NR: AP7005697 (A) SOURCE CODE: UR/0413/67/000/002/0187/0188

INVENTOR: Abramovich, R. B.; Arinushkin, L. S.; Gorbunov, V. S.; Ivanov, Yu. P.; Yasinskiy, S. Ya.

ORG: None

TITLE: An electrically driven pump assembly for flushing systems such as those used in the washrooms on passenger aircraft. Class 62, No. 152798

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1967, 187-188

TOPIC TAGS: sanitary equipment, auxiliary aircraft equipment, water pump

ABSTRACT: This Author's Certificate introduces: 1. An electrically driven pump assembly for flushing systems such as those used in the washrooms on passenger aircraft. The installation consists of an electric motor and a pump. Operational reliability is improved by keeping corrosive sewage away from the motor. The motor is located at a distance from the pump on a rigid hollow column above the flush tank. The motor is connected to the pump through an intermediate drive located in the standing column. This drive consists of two shafts pinned together and connected by splines to the motor and the pump. 2. A modification of this assembly in which the column is equipped with an overflow tube connected to the tank for maintaining the proper level of flushing liquid in the column.

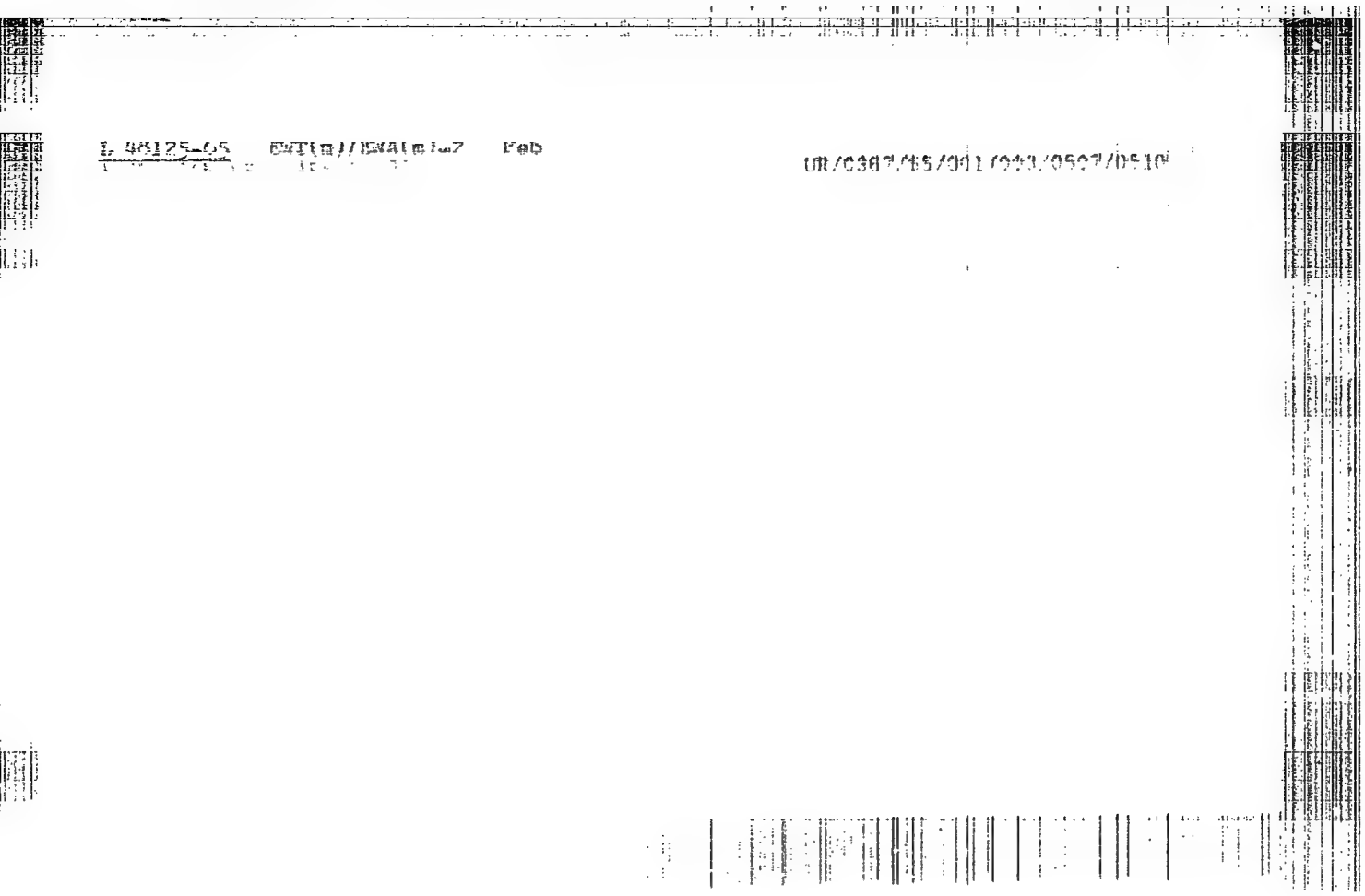
SUB CODE: 13/ SUBM DATE: 25Feb62

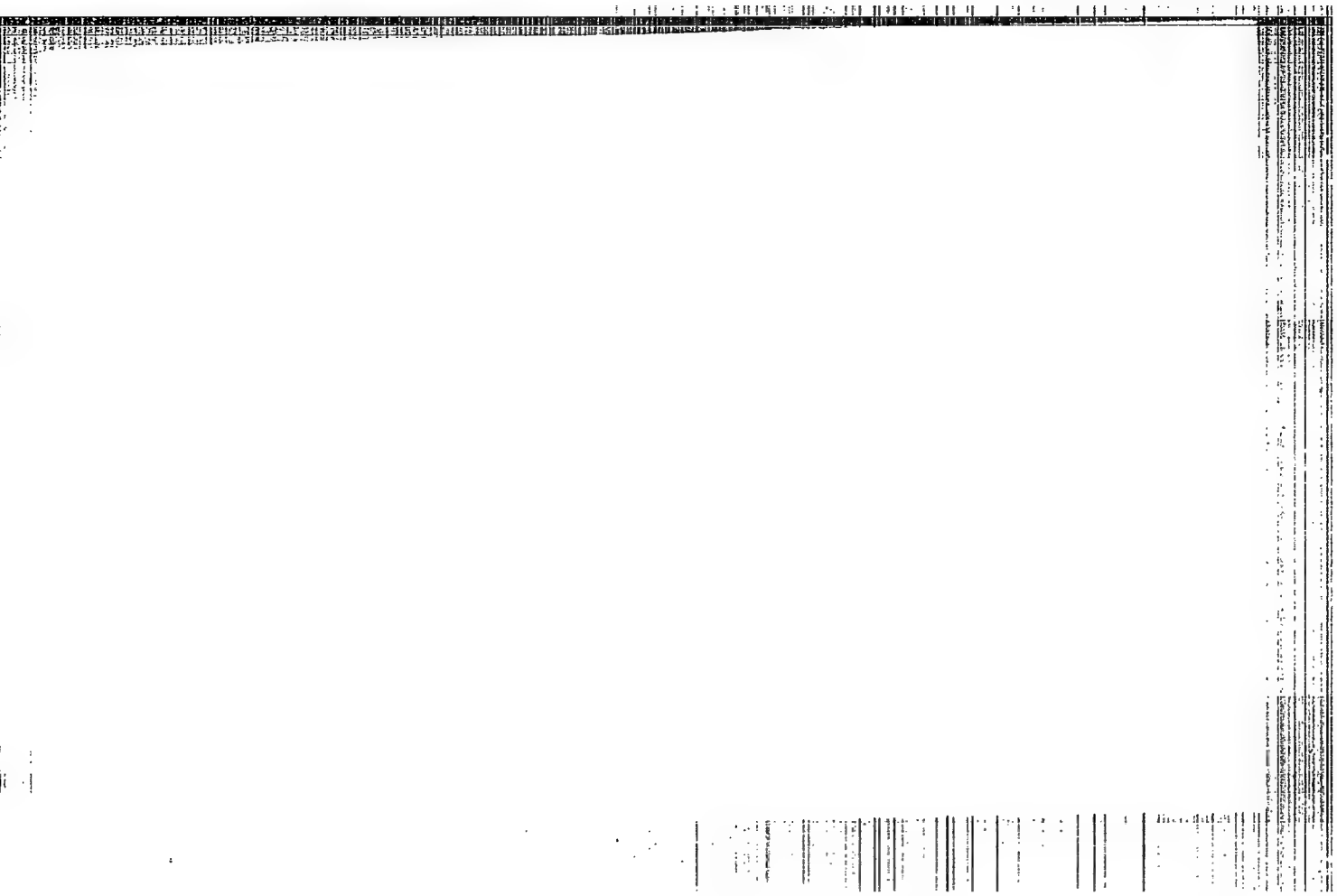
Card 1/1

STROGANOV, A.N.; IVANOV, Yu.P.

Some textural characteristics of greisens in the Aksha-Tau massif (central Kazakhstan). Biul.MOIP.Otd.geol. 36 no.6:103-104 N-D '61. (MIRA 15:7)

(Kazakhstan--Greisen)





APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619210014-7"

ACCESSION NR: AP4043835 S/0020/64/157/005/1096/1099

AUTHORS: Sokolov, A. A.; Ivanov, Yu. P.; Pavlenko, Yu. G.; Kerimov, B. K.

TITLE: Account of damping in weak interactions

SOURCE: AN SSSR. Doklady*, v. 157, no. 5, 1964, 1096-1099

TOPIC TAGS: weak interaction regime, elementary particle, scattering amplitude perturbation theory, polarization, neutrino, mu meson, electron

ABSTRACT: The scattering of an electronic neutrino by an electron or the scattering of a muonic neutrino by a muon are considered in the four-component theory with damping taken into account. The use of damping theory eliminates the difficulty arising at high neutrino energies (~10^3 BeV in the center of mass system), when the lower order of perturbation theory yields diverging series. Since the

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ACCESSION NR: AP4043835

solution of the equations of damping theory for the scattering amplitudes is equivalent to summation of a series of chain diagrams, this series can be summed in the region of convergence and the resultant scattering amplitude can be regarded as an analytic continuation of the series in the region of divergence. The summation is facilitated by using Wigner d-functions (M. Jacob and G. C. Wick, Ann. Phys., v. 7, 404, 1959) making the resultant amplitude differ from the perturbation-theory amplitude by the presence of a denominator such that the partial cross sections never exceed unity. In the case of antineutrino scattering by an electron, account must also be taken of the S and P waves. The polarization properties of scattering of neutrinos by polarized electrons is examined and it is shown that the recoil electrons will be fully polarized in a longitudinal direction only in the ultrarelativistic case. This report presented by N. N. Bogolyubov. Orig. art. has: 3 figures and 13 formulas.

Card 2/3

ACCESSION NR: AP4043835

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 24Mar64 ENCL: 00

SUB CODE: NP NR REF SOV: 001 OTHER: 007

Card 3/3

SOKOLOV, A.A.; IVANOV, Yu.P.; PAVLENKO, Yu.G.; KERIMOV, B.K.

Making allowance for damping in weak interactions. Dokl. AN SSSR 157 no.5:1096-1099 Ag '64. (MIRA 17:9)

1. Moskovskiy gosudarstvennyy universitet. Predstavleno akademikom N.N. Bogolyubovym.

SOKOLOV, A.A.; IVANOV, Yu.P.; KOLESNIKOVA, N.M.

Neutrino scattering by electrons with longitudinal and transverse polarization. Izv. vys. uchob. zav.; fiz. 7 no.6:51-57 '64.
(MIRA 18:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

SOKOLOV, A.A.; IVANOV, Yu.P.; GAL'TSOV, D.V.

Influence of the spin effect on the annihilation and production of electron-positron pairs due to weak interaction. IAd. Fiz. 1 no.3: 507-510 Mr '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet.

IVANOV, Yu.F.; TARSHIS, Yu.D.

Model LU17 veneer peeling machine. Der. prom. 14 no.9:14-15 S '65. (MIRA 18:12)

S/124/62/000/003/014/052
D237/D301

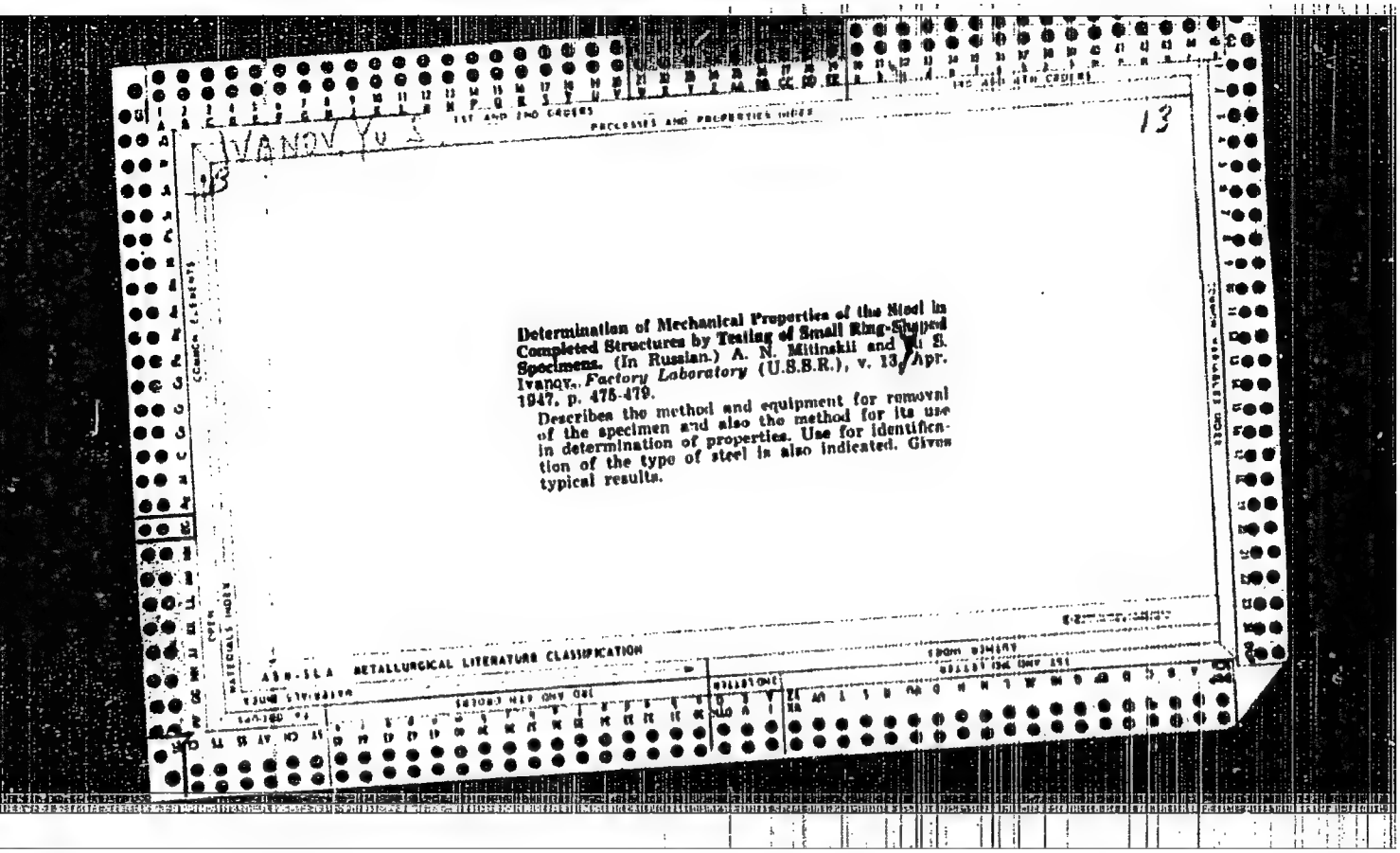
AUTHORS: Faynzil'berg, S.N., and Ivanov, Yu.S.

TITLE: Methods of processing experimental data and determining air consumption in ventilation experiments with high and medium power electric motors

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1962, 44, abstract 3B246 (Izv. Kiyevsk. politekhn. in-ta, 1960, 129 - 139)

TEXT: A method of processing experimental data in determination of air consumption in ventilation experiments with high and medium power electric motors is presented. In view of the pronounced lack of uniformity of velocity fields in electric motors, the method is based on the detailed investigation of velocity fields across the entry ducts of electric motors. The method of calculating air consumption considered here is compared with other methods of data processing. [Abstractor's note: Complete translation].

Card 1/1



IVANOV Yu S

13

Determination of Mechanical Properties of the Steel in Completed Structures by Testing of Small Ring-Shaped Specimens. (In Russian.) A. N. Mitinskii and Yu S. Ivanov. *Factory Laboratory* (U.S.S.R.), v. 13, Apr. 1947, p. 475-479.

Describes the method and equipment for removal of the specimen and also the method for its use in determination of properties. Use for identification of the type of steel is also indicated. Gives typical results.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1671

PHOTOFISSION OF URANIUM NUCLEI WITH EMISSION OF THE LIGHT LONG-RANGE PARTICLES. [illegible]

Sannik and Yu. S. Ivanov (Lebedev Physics Inst.). Doklady Akad. Nauk S.S.S.R. 103, 987-9(1955) Aug. 21. (In Russian)

Nuclear emulsions were used to observe the fission of uranium nuclei effected by photons of high energies of and 150 to 250 Mev. Experiments with energies over 150 Mev indicated an escape of a third light, charged, long range particle which the authors named "triple fission." A table of triple fission frequency with energies of 150 to 240 Mev is given. As the process of triple fission in uranium with high energies E_γ >150 Mev the authors consider as follows: in the uranium nucleus a photon creates a meson (π^+, π^-, or π^0) which is absorbed by inner neutrons of the nucleus, and as a result of absorption a small tightly bound group of nucleons (or possibly one separate nucleon) obtains sufficient energy to escape out of the nucleus as a separate particle. Angular distribution of the triple fission long range particles is given in support of the theory. (R. V. J.)

(1)

CARD 1/2

Abs Jour : Referat Zhur - Khimiya, No 7, 1957, 21915

energies of fragments are tabulated. The probability that the origin of the described case is due to a photoneutron or slow neutron is negligibly small.

Ivanov, Yu. S.

INSTRUMENTATION: CLOUD CHAMBERS

"Increasing the Efficiency of a Cloud Chamber Working in the Synchroton Photon Beam", by Yu.S. Ivanov and A.I. Fesenko, Physics Institute imeni P.N. Lebedev, Academy of Sciences USSR, Pribory i Tekhika Eksperimenta, No 3, November-December 1956, pp 36-38.

Description of a method of superheating the gas in an ordinary cloud chamber, so as to insure increasing the velocity of evaporation of the drops and rapidly increasing the efficiency of the chamber when working with pulsed accelerators.

1. Fizicheskiy INSTITUT im. P.N. Lebedeva AN SSSR

Card 1/1

IVANOV, Yu.S.

120-3-2/40

AUTHORS: Gerasimov, A.G., Gorbunov, A.N., Ivanov, Yu.S., Kutsenko, A.V., Spiridonov, V.M.

TITLE: A Wilson Chamber for Work in the Beam of Cyclotron Radiation and the Auxiliary Apparatus (Kamera Vil'sona dlya raboty v puchke izlucheniya sinkhrotrona i vspomogatel'naya apparatura)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, Nr 3, pp.10-14 (USSR)

ABSTRACT: A Wilson cloud chamber which operates in a magnetic field is described. It can be used to study photonuclear reactions. The working regime has already been given in a previous paper (Ref.1). In the present paper a description is given of the various parts of the chamber and of the auxiliary apparatus, i.e., the control apparatus, the apparatus synchronizing the work of the chamber with that of the synchrotron, and the apparatus used to measure the intensity of the emitted pulses which are recorded by the Wilson chamber. An important part of the chamber is an organic film 70μ thick which serves as the window through which the γ-rays enter the sensitive volume. The film is 30 mm in diameter and can withstand a pressure of the order of 3-4 atmospheres. The method of mounting of the film is shown

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A Wilson Chamber for Work in the Beam of Cyclotron Radiation and the Auxiliary Apparatus.

in Fig.1. An electrostatic field of ~40 V/cm is established between the glass lid and the bottom of the chamber. This field removes ions formed within the volume of the chamber during irradiation. The pressure in the lower volume of the chamber is stabilised to ~0.01 atm. using a mechanical pressure stabilizer shown in Fig.2 and developed by D. V. Emel'yanov. A detailed description is given of the controlling and synchronizing devices. "Exact" operations (expansion of the chamber, separation of single pulses, illumination, etc.) are controlled by the circuit shown in Fig.4 and the "rough" operations are controlled by the circuit of Fig.5. The absolute beam intensity was obtained by measuring the β activity of a graphite specimen placed in the γ-beam. The chamber was used to study photodisintegration of He at a maximum energy of 170 MeV. A typical photograph of the $He^4(\gamma p)H^3$ reaction is shown in Fig.7. Thanks are given to P.A.Cherenkov for help and interest. There are 7 figures, no tables and 5 references, of which 3 are Russian and 2 are English.

Card 2/3

IVANOV, Yu.S.; YAKUSHKIN, V.Ye.

Numbering frames of stereoscopic photographs of a Wilson chamber. Prib. i tekh. eksp. no.3:146 My-Je '60. (MIRA 14:10)

1. Fizicheskiy institut AN SSSR.
(Photography, Particle track)
(Numbering machines)

40750

S/120/62/000/004/018/047
E192/E382

24.6730

AUTHORS: Burshteyn, E.L., Ivanov, Yu.S. and Kuz'min, A.A.

TITLE: Method of designing the automatic-control system for radial and phase positioning of the beam in the proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no. 4, 1962, 102 - 105

TEXT: The design of the automatic-control system for positioning of the beam in the synchrotron consists of determining the relationship between the coordinates of the beam and the factors which determine its motion: frequency ω_r ; high-frequency accelerating field V ; magnetic field H . The system considered is based on the radial and phase positioning and stabilization of the beam by using the frequency correction of the accelerating field. The dynamic characteristics of the beam and the characteristics of the feedback circuits are taken into account. The control system is illustrated diagrammatically in Fig. 1, where 1 - cylindrical signal electrode, 2 - are

Card 1/5

differential signal electrodes, 3 - phase discriminator, 4 - radial-position indicator, 5- adding circuit, 6 - correction circuit, 7 - frequency-modulated oscillator, 8 - an amplifier-distributor, 9 - power amplifier, 10 - accelerating electrode and 11 - a programme input. The input signals from the radial and phase-positioning indicators are added (with suitable "weights") in the circuit 5 and are employed to control the frequency of the programmed oscillator. Use of the programmed oscillator makes it possible to perform the initial acceleration process when the beam is not yet bunched and to reduce the gain in the feedback circuits. The equations for the phase ψ and radial (orbital) λ deflections are in the form:

$$\psi - D(\tau\lambda) = -(\nu - \mu)$$

$$(D + a)\psi + b\lambda = \frac{\Omega_0^2 \tau}{\sqrt{1 + \tau^2}} \hat{\delta} \qquad (7)$$

Method of designing ....

where

$$D = d/d\tau, \quad a = -\frac{\Omega_o^2 \tau}{\sqrt{1+\tau^2}} Q_2 ,$$

$$b = \frac{\Omega_o^2 \tau}{\sqrt{1+\tau^2}} (f\sqrt{1+\tau^2} - Q_1) ,$$

$$\hat{\delta} = \delta' + Q_1 \xi_\lambda + Q_2 \xi_\psi$$

where δ' is the frequency deviation of the accelerating field without feedback, Q_1 and Q_2 are transfer functions of the feedback networks for λ and ψ, ξ_λ and ξ_ψ are the errors of the indicators measuring λ and ψ, τ is the normalized

Card 3/5

Method of designing ....

time, $\Omega_0^2 = (2\pi qE_0 \cos\varphi_s)/(eV_0 \sin^2\varphi_s)$, φ_s is the equilibrium phase, ν is the deviation of the high-frequency field and $\varkappa = d(\tau\eta)/d\tau$, where η is the deviation of the magnetic field. Eqs. (7) show that for $Q_2 < 0$ the radial-phase oscillations are damped. By solving the equations for given values of external perturbation δ', ν and $\varkappa$ and given indicator errors ξ_λ and ξ_ψ, it is possible to determine the necessary feedback transfer functions Q_1 and Q_2 in order to obtain the required values of λ and ψ. Since the coefficients of Eq.(7) are variable, Q_1 and Q_2 will also be functions of time. Eqs. (7) can best be solved by means of an analogue computer. There are 2 figures.

ASSOCIATION: Radiotekhnicheskiy institut GKAE
(Radio-engineering Institute, GKAE)

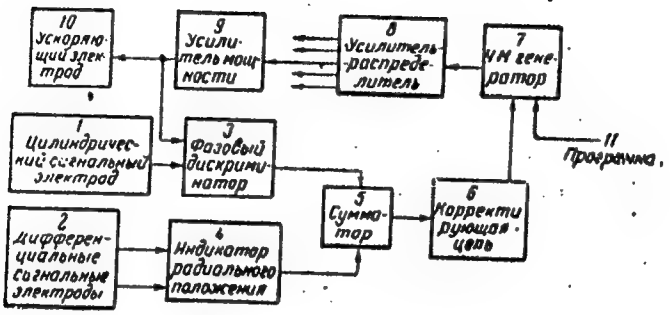
SUBMITTED: April 23, 1962

Card 4/5

Method of designing ....

S/120/62/000/004/018/047
E192/E382

Fig. 1:



Card 5/5

S/120/62/000/004/019/047
E192/E382

AUTHORS: Ivanov, Yu.S. and Kuz'min, A.A.

TITLE: System of the accelerating voltage frequency-control based on beam data

PERIODICAL: Pribory i tekhnika eksperimenta, no. 4, 1962, 106 - 111

TEXT: The frequency-control system for the accelerating voltage of the 7 GeV proton synchrotron stabilizes the radial position and damps the phase oscillations of the gravity centre of the beam. This is achieved by correcting the frequency by means of signals proportional to the radial displacement of the beam relative to the central orbit and the phase difference between the beam and the accelerating potential. A block diagram of the control equipment is shown in Fig. 1. The voltages proportional to the radial deviations and the phase difference are obtained at the outputs of the radial pick-up 26 and the phase pick-up 25 . These signals are added and are employed to modulate, via a correction network, the frequency of the local oscillator (heterodyne) 13 of the driver oscillator 24 .

Card 1/3

System of ....

The signal from the driver oscillator is applied to a pre-amplifier 6 , a wideband amplifier 5 and automatically-tuned resonance amplifiers 4 , from which it is fed to the accelerating electrodes 1 . The control system for the output coordinates of the beam consists of two channels and contains a number of complex elements which are, in fact, in themselves automatic-control systems. The control system is designed by using the method described in the preceding article of this journal (p.102). The stability of the system at high frequencies is achieved by suitably choosing the frequency characteristics of the radial and phase pick-ups. Thus, the slope of the radial pick-up characteristic at high frequencies should be 6 db/octave. The design was based on the maximum possible values of the transfer functions Q_1 and Q_2 , such that the system was still stable. These values were: $Q_1 = 70$ and $Q_2 = 0.8 \times 10^{-2}$. By using the system the coherent phase oscillations were reduced to approximately 0.05 p and the radial position of the beam was stabilized to within $\pm$ 1 mm. There are 6 figures.

Card 2/3

S/120/62/000/004/020/047
E192/E382

AUTHORS: Vasil'yev, A.A., Kuz'min, A.A. and Ivanov, Yu.S.

TITLE: Investigation of the beam-based frequency-control system by means of a radioelectronic model of the beam of a 7 GeV proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no. 4, 1962, 111 - 115

TEXT: Considerable difficulties are encountered when designing a control system based on the data provided by the beam of the synchrotron since the problem is nonlinear and the control "ring" contains a number of networks which are described by higher-order differential equations. An electronic simulator has therefore been devised, based on the analogy between the phase of a frequency-modulated oscillator which was synchronized by the accelerating voltage and the azimuthal position of the beam. The block schematic of the analogue is shown in Fig. 1. This consists of: 1 - a phase-detector; 2 - adding circuit; 3 - integrator; 4 - frequency-modulated oscillator; 5 - a mixer and 6 - a balanced modulator. The output voltage of the

Card 1/3

simulator U is applied to the input of the phase-detector. The voltage obtained at the output of the detector is added to the voltage U_o and this is integrated by 3 . The output of the integrator modulates the frequency of the oscillator 4 . The resulting signal is applied to the balanced modulator 6 , together with the signal from the output 1 . In this way, the high-frequency signal obtained at the output 2 has an amplitude $\alpha_r U_u B$. The analogue thus produces two signals: the first of these corresponds to the signal obtained from the electrostatic electrode of the phase pick-up, while the second signal corresponds to the signal of the radial pick-up. By using the analogue it was possible to design an accurate system for controlling the frequency of the beam. In particular, an analogue permitted the investigation of the transient processes in the control system. There are 4 figures.

Card 2/3

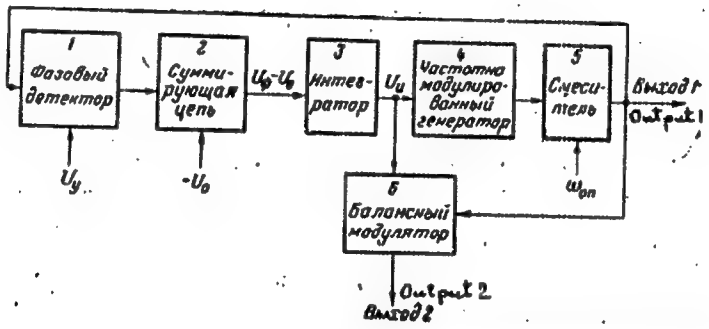
Investigation of ....

S/120/62/000/004/020/047
E192/E382

ASSOCIATION: Radiotekhnicheskiy institut GKAE
(Radio-engineering Institute, GKAE).

SUBMITTED: April 6, 1962

Fig. 1:



Card 3/3

IVANOV, Yu.S., FEDOROV, V.M.

"Dead time" of a Wilson chamber. Prib. i tekh. eksp. 8 no.6: 42-44 N-D '63. (MIRA 17:6)

1. Fizicheskiy institut AN SSSR.

L 3778-66 EWT(m)/EWA(m)-2 IJP(c) GS

ACCESSION NR: AT5007965 S/0000/64/000/000/0932/0936

AUTHOR: Vodop'yanov, F. A.; Zhukovskiy, L. S.; Zalmanzon, V. B.; Ivanov, Yu. S.; Izergina, Ye. V.; Kuz'min, A. A.; Prokop'yev, A. I.; Temkin, A. S.; Rubchinskiy, S. M.

TITLE: System for the generation of the accelerating field of a 70-Gev proton synchrotron

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 932-936

TOPIC TAGS: high energy accelerator, synchrotron, particle beam, magnetic field

ABSTRACT: After the development of a high-precision system of frequency control of the accelerating field of the proton 50-60 Gev synchrotron with critical energy compensation (Mints, A. L., et al., Proc. International Conference on High Energy Accelerators and Instruments, CERN 1959), it was decided to achieve an alternative accelerator with transition through the critical energy, which makes it possible to increase the energy to 70 Gev. In this modification of the accelerator serious difficulties are encountered with the realization of a system for generating an accelerating field with frequency control only according to the H-program. Therefore,

Card 1/3

L 3778-66

ACCESSION NR: AT5007965

it was decided to achieve a system with twin frequency control: rough, according to the *H*-program, and precise, according to the information on the radial and phase position of the accelerated particle beam. The present report discusses the principal characteristics governing the achievement of a programmed FM-generator, a system of frequency control according to information of the position of the accelerated particle bunches, and accelerator installation. The programmed FM-generator consists of the usual elements: transducer of the derived magnetic field strength (inductive coil in the gap of the measuring electromagnet), electronic switch, tube integrator, modulator, FM-oscillator, phase manipulator, amplitude modulator of accelerating voltage, amplifier-distributor, and a system of cable contacts. To obtain energy increase per revolution of δE = 166 Kev for a rate of change of magnetic field strength of $\dot{H}$ = 550 oersteds/second and ϕ_s = 30°, provision is made for the application of 53 accelerator stations with rated input of 7 kilovolts and 6 kilowatts power. Provisions are also made for the short-duration increase of this voltage, 1.8 times up to the time of beam bunching (around 15 microseconds), and its slow decrease to about 2 times less toward the end of the acceleration cycle with the aim of preserving constant equilibrium phase during the fall in the magnetic field growth rate. The system of frequency control of the accelerating field according to the information on the accelerated particle beam position is similar in

Card 2/3

L 3778-66
ACCESSION NR: AT5007965

principle of operation to a system described by Yu. S. Ivanov and A. A. Kuz'min (*Pribory i tekhnika eksperimenta*, No. 4, 106, (1962)), which was intended to stabilize the position of the center of gravity of the beam according to radius and phase. Orig. art. has: 1 figure.

ASSOCIATION: Radiotekhnicheskiy institut AN SSSR (Radio Engineering Institute, AN SSSR)

SUBMITTED: 26May64 ENCL: 00 SUB CODE: NP

NO REF SOV: 001 OTHER: 001

Card 3/3

L 12998-63 EWT(m)/EPA(s)-2/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Pg-4/Pt-10 RPL EWA/

ACCESSION NR: AP4045373 S/0286/64/000/016/0031/0031

AUTHOR: Ivanov, V. S.; Kostreva, I. P.; Lavrado, L. K.

TITLE: Preparative method for high-thermal-stability polymers. Class 39, No. 164678

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1964, 31

TOPIC TAGS: polymer, high thermal stability, radiation induced polymerization, maleimide

ABSTRACT: An Author Certificate has been issued for a method of preparing high-thermal-stability polymers by ionizing-radiation-induced polymerization of N,N'-arylenedimaleimides monomers in the solid state. The polymerization is conducted at a temperature below the [illegible] melting point, in an inert gas or in vacuum. The [illegible] is heated to above the monomer melting

Card 1/2

L 12998-65

ACCESSION NR: AP5002[illegible]

ASSOCIATION: none

SUBMITTED: 17Jun63 ATD PRESS: 3108 ENCL: 00

SUB CODE: OC, MT NO REF SOV: 000 OTHER: 000

Card 2/2

ACC NR: AT6022476 SOURCE CODE: UR/0000/65/000/000/0181/0197

75

B+1

AUTHOR: Grodzovskiy, G. L.; Ivanov, Yu. N.; Tokarev, V. V.

ORG: None

TITLE: Optimization problems in the mechanics of low-thrust space flight

SOURCE: Vsesoyuznyy. s"yezd po teoreticheskoy i prikladnoy mekhanike. 2d, Moscow, 1964. Analitcheskaya mekhanika. Ustoychivost' dvizheniya. Nebesnaya ballistika (Analytical mechanics. Stability of motion. Celestial ballistics); trudy s"yezda, no. 1, Moscow, Izd-vo Nauka, 1965, 181-197

TOPIC TAGS: trajectory optimization, space flight, thrust optimization, solar sail

ABSTRACT: The authors consider the problem of optimization in the mechanics of space flight with low thrust. Included in this problem are selection of the optimum ratios between the weight components of the spacecraft and optimum control of the thrust system as well as determination of the optimum trajectories of the flight in the aggregate. A relationship is established between the weight characteristics and parameters of the engine system and the possibilities for thrust control are discussed. Optimization of flight mechanics is considered in detail for systems using solar sails and

Card 1/2

L 05879-67

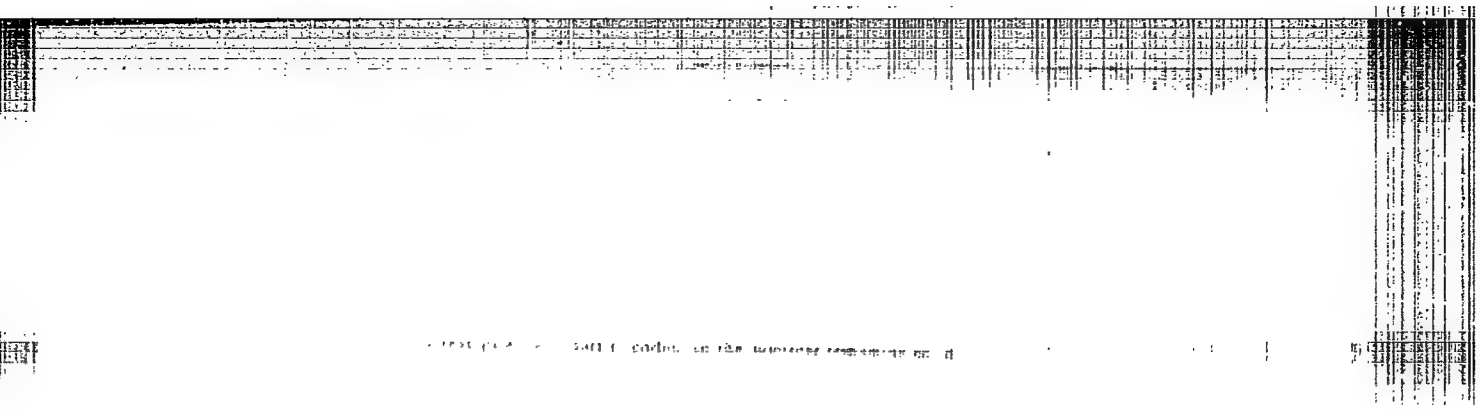
ACC NR: AT6022476

power-limited propulsion systems, e. g. electric reaction engines. It is shown that the problem of optimization for an ideal system resolves into two independent problems: 1. finding the optimum ratio between the weight of the power source and the weight of the working material and 2. finding the optimum trajectories and programs for the rocket acceleration vector. The literature covering the numerical solution of these problems is briefly reviewed. Orig. art. has: 13 figures, 34 formulas.

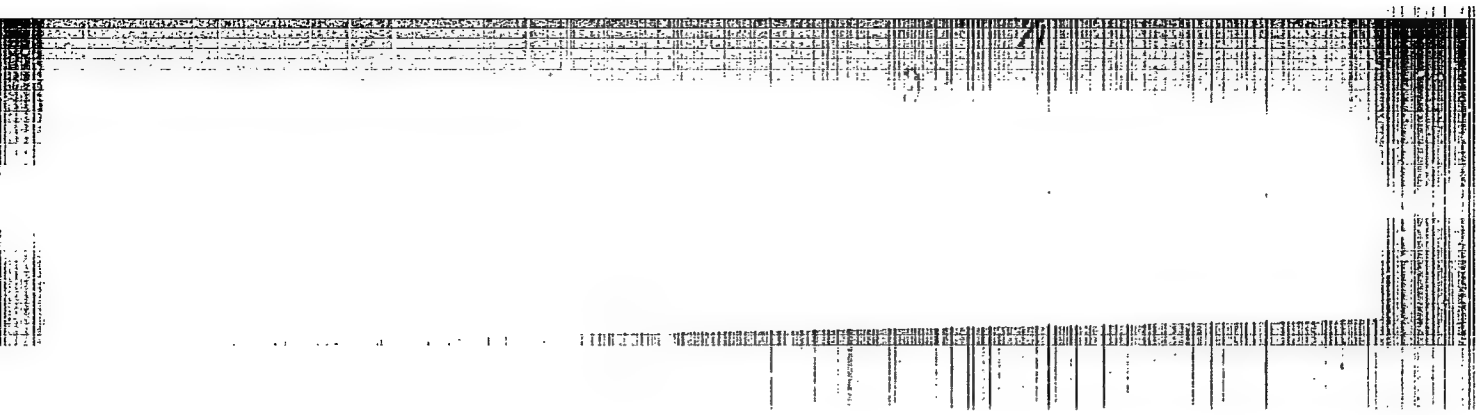
SUB CODE: 22/ SUBM DATE: 04Dec65/ORIG REF: 022/ OTH REF: 023

kh

Card 2/2



APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619210014-7"



APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619210014-7"

IVANOV, Yu.V., otvetstvennyy za vypusk; KOGAN, F.L., tekhnicheskiy redaktor

[Technology and organization of the technical servicing of automobiles] Tekhnologiia i organizatsiia tekhnicheskogo obsluzhivaniia avtomobilei v avtokhoziaistvakh. Moskva, Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1956. 279 p. (MLRA 9:9)

1. Moscow. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy institut avtomobil'nogo transporta.
(Automobiles--Repairing)

IVANOV, Yuriy Vladimirovich, kand.tekhn.nauk; Prinimali uchastiye: ALEKSEYEV, N.I., inzh.; FILIPPOV, Ye.N., mekhanik; FILIPPOV, G.F., mekhanik. BOLSHILIN, A.P., red.; NIKOLAYEVA, L.N., tekhn.red.

[Maintenance of the steering gear and pin couplings in a motor vehicle] Proverka tekhnicheskogo sostoianiia rulevogo upravleniia i shkvornevykh soedinenii avtomobilei. Moskva, Avtotransizdat, 1960. 31 p. (MIRA 13:11)
(Motor vehicles--Maintenance and repair)

IVANOV, Yu.V.

Pulse generator for radiation-monitoring equipment. Priborostroenie no.1:30 Ja '62. (MIRA 15:1)

(Pulse techniques (Electronics))

IVANOV, Yu.V.

Pressing problems of measurement techniques in gear-type traction transmission systems. Elek. i tepl. tiaga 6 no.10:4-5 O '62. (MIRA 15:11)

1. Nachal'nik izmeritel'noy laboratorii Lyublinskogo liteyno-mekhanicheskogo zavoda.
(Gearing--Testing) (Gearing--Standards)
(Locomotives--Transmission devices)

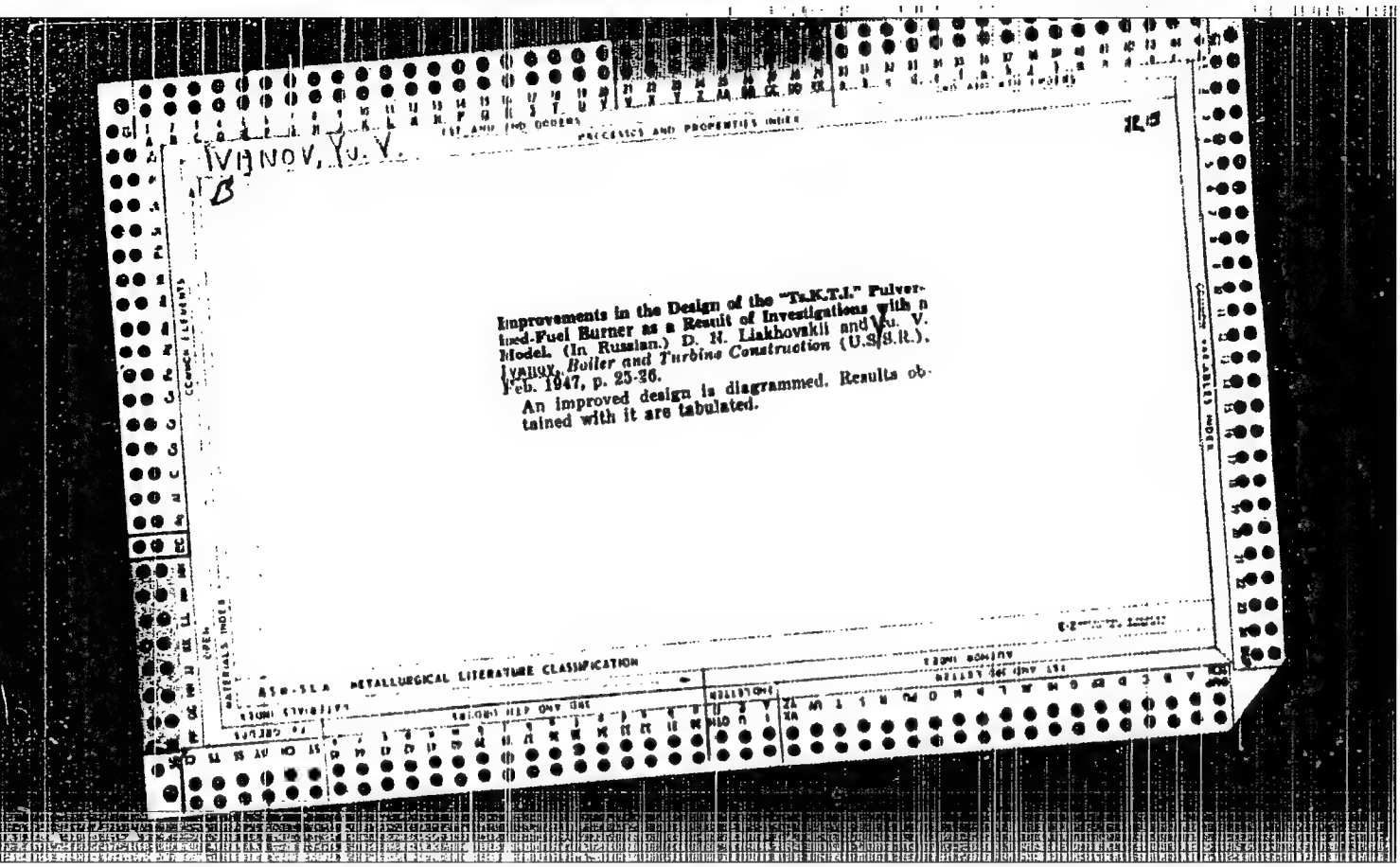
IVANOV, Yu.V.

Measuring traction gears of diesel and electric locomotives.
Izm.tekh. no.8:19-20 Ag '62. (MIRA 16:4)
(Locomotives—Transmission devices)

MILOSLAVSKIY, Ya.I.; ARDAMATSKIY, N.A.; IVANOV, Yu.V.; LIKHVANTSEV, V.A.; LEGKUN, A.M.; MASLENNIKOVA, A.I.; CHERNYSHEVA, M.I.; TYUNINA, Ye.A.; SHOLOKHOVA, G.I. (Ryazan')

Urinary excretion of 17-ketosteroids and 17-hydroxy corticosteroids in healthy people. Probl. endok. i gorm. 9 no.3:76-80 My-Je '63. (MIRA 17:1)

1. Iz kafedry fakul'tetskoy terapii (ispolnyayushchiy obyazannosti zaveduyushchego - dotsent N.A. Ardamatskiy) Ryazanskogo meditsinskogo instituta imeni I.P. Pavlova.



VINOV, Yu. V.

B

Improvements in the Design of the "Tu.K.T.I." Pulverized-Fuel Burner as a Result of Investigations with a Model. (In Russian.) D. N. Liakhovskii and Yu. V. Ivanov. *Boiler and Turbine Construction* (U.S.S.R.), Feb. 1947, p. 25-26.

An improved design is diagrammed. Results obtained with it are tabulated.

8800. APPLICATION OF THE SOLUTION OF THE PROBLEM OF MIXING A JET OF AIR IN A TRANSVERSE FLOW TO THE CALCULATION OF GAS BURNERS. [illegible] (Izv. Akad. Nauk SSSR (Bull. Acad. Sci. [illegible], U.S.S.R.), 1954, vol. [illegible]; abstr. in [illegible] (Ref. J. Mech., Moscow), 1955, (8), [illegible]). Equations [illegible] for calculation of the mixing process of an air jet in a transverse [illegible] agree with the data of a number of experimental investigations.

USSR/Engineering - Gas Turbines

Card 1/1 : Pub. 41-5/18

Author : Ivanov, Yu. V., Tallin

Title : Some rules of a free circular stream developing in an external transverse current

Pericdical : Izv. AN SSSR. Otd. tekh. nauk 8, 37-52, Aug 1954

Abstract : Investigates characteristics of a circular isothermal and an anisothermal stream of air developing in an external homogeneous transverse stream in order to obtain information for calculating the forced draft in combustion chambers. Presents rules obtained for above-mentioned stream on the basis of experiments described in article. Various stream diameters, angles of attack, relative velocities and temperatures were used in the experiments. States the following participated in experiments: A. A. Tsar'kova, G. D. Semenova, and Ye. S. Zherdina. Diagrams; tables; graphs. Six references.

Institution :

Submitted : April 22, 1954

IVANOV, Yu. V.

SOV/112-58-1-168

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 1, p 19 (USSR)

AUTHOR: Ivanov, J., Saar, U., and Sui, H.

TITLE: Investigation of Furnace Aerodynamics on a Simulator. Paths of a Row of Sharp-Blowing Round Jets with One-Way Supply (Issledovaniye aerodinamiki topki na modeli. Traektorii ryada kruglykh struy ostrogo dut'ya pri odnostoronnem podvode)

PERIODICAL: Izv. AN EstSSR, ser. tekhn. i fiz.-matem. n., 1956, Vol 5, Nr 4, pp 308-323

ABSTRACT: On the basis of investigation of a simulator with a number of sharp-blowing jets, jet paths in a transverse flow limited by the walls under various conditions are described. A unit-jet path equation is presented for the ratio of the semiwidth of the jet entry channel diameter of 30 or more. An equation is submitted for calculating jet paths having a relative pitch s/d = 16. The lower the s/d is, the less the jet range is.

L.B.K.

AVAILABLE: Library of Congress

Card 1/1 1. Furnaces--Simulation 2. Furnaces--Aerodynamic characteristics

IVANOV, Yu. V.

23-4-2/18

AUTHORS: Ivanov, Yu. V. and Saar, Yu. E., Candidates of Technical Sciences, and Sui, H. (Suy, Kh. N.)

TITLE: Investigation of Furnace Aerodynamics on a Model (Issledovaniye aerodinamiki topki na modeli); Subtitle: Processes of Mixture Formation on the Travelling Grate Stoker during the Combustion of Oil Shale (Protsessy smeseobrazovaniya pri sloyevom szhiganii slantsa)

PERIODICAL: Izvestiya Akademii Nauk Estonskoy SSSR, Seriya Tekhnicheskikh i Fiziko-Matematicheskikh Nauk, 1957, # 4, pp 313-320 (USSR)

ABSTRACT: In a previous paper (Ref 1) the authors determined the qualitative (and quantitative) influence of already known determining parameters of sharp blast jets on the trajectory of jets; and a definition of the new determining constructive parameter, the relative pitch ratio (s/d), was given.

The present research, based also on experiments carried out on a model, applying a wide range of determining constructive and regime parameters, resulted in the determination of the quantitative influence of these parameters on the

Card 1/2

AUTHOR: IVANOV,YU.V., SAAR,YU.E., SUY,KH.N. (Tallin) PA - 3083

TITLE: The Investigation of Trajectories of Round Turbulent Beams which are Developed in an Organic Cross Current. (Issledovaniye trayektoriy kruglykj turbulentnykh struy, razvivayushchikhsya v poperechnom potoke, Russian)

PERIODICAL: Izvestiia Akad.Nauk SSSR, Otdel.Tekhn., 1957, Vol 21, Nr 3, pp 159-162 (U.S.S.R.)

Received: 6 / 1957 Reviewed: 7 / 1957

ABSTRACT: This work is a continuation of one by IVANOV in Izvestiia Akad.Nauk SSSR, Otdel.Tekhn., 1954, Nr 8. It shows the results of an investigation which was carried out in a cross current limited by a channel and with different values for the relative division between the beams. On the basis of the experiments the following can be said:

1. The trajectories of the individual beams which are developed in limited cross currents correspond to these trajectories which are developed in a free cross current where the ratio of the channel breadth B is to the beam diameter at the mouth d as $B/d \geqslant 60$.
2. It was confirmed by the experiments that the determining construction parameter s/d (s is the absolute distance between the centers of the neighboring beams in a series in mm) exercises a fundamental influence on the trajectories of the beam series and must be taken into consideration in the calculation.

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Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 12, p. 18, # 33494

AUTHORS: Ivanov, Yu.V., Katsnel'son, B.D., Pavlov, V.A.

TITLE: Aerodynamics of the Turbulence Chamber

PERIODICAL: V sb.: Vopr. aerodinamiki i teploperedachi v kotel'no-topochn. protsessakh, Moscow-Leningrad, Gosenergoizdat, 1958, pp. 100-114

TEXT: Investigations of the flow aerodynamics have been carried out on an air model of a turbulence chamber with a diameter D_c = 710 mm and a height of 250 mm at different diameters of the chamber outlet D_o and at different dimensions of the inlet slots. It has been established that circumferential velocities in a turbulence chamber with tangential air feed increase over the entire height up to a certain maximum as the radius decreases. On the contrary, in the axial zone of the chamber, the circumferential flow velocity increases from zero on the axis to the above-mentioned maximum of the circumferential velocity as the radius increases. The circumferential flow velocity ($W\varphi$) in the turbulence chamber at a radius r is determined by the relation $W\varphi = r^k = C$, where C and k

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Aerodynamics of the Turbulence Chamber

are values depending on the chamber design. Axial velocities in the chamber over the ring adjoining the outlet are directed towards the flow outlet, the zone of the flow near the axis is directed towards the inside of the chamber. As the relation $\frac{D_o}{D_k}$ decreases, the maximum circumferential and axial velocities of the reverse stream increase. A change in the height of the air feed at a constant area of slots (other conditions being equal) does not influence the character and magnitude of circumferential velocities. The resistance coefficient of the chamber depends to a great extent on the relations

$$\frac{D_o}{D_k} \quad \text{and} \quad \frac{b}{D_k}$$

(b is the width of the inlet slot) and decreases sharply when they increase.

B.I.L.

Translator's note: This is the full translation of the original Russian abstract.

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IVANOV, Yu. V.: Doc Tech Sci (diss) -- "Investigation of streams in free and restricted flow". Moscow, 1958. 39 pp (Acad Sci USSR, Power Engineering Inst im G. M. Krzhizhanovskiy); 150 copies (KL, No 13, 1959, 103)

AUTHOR: Ivanov, Yu.V., Candidate of Technical Sciences 23-58-2-6/9
Suy, Kh.N.

TITLE: A Study of the Development of a Jet in a Co-Stream (Issledovaniye razvitiya strui v sputnom potoke)

PERIODICAL: Izvestiya Akademii nauk Estonskoy SSR, Seriya tekhnicheskikh i fiziko-matematicheskikh nauk, 1958, Nr 2, pp 142-147 (USSR)

ABSTRACT: The article gives experimental data on the development of a round and a flat jet in a co-stream. Axial velocities of jets at different parameter values are shown in diagrams, which indicate that jets of various diameters generalize into one single curve at the given value of λ. The experiments were conducted by the authors at the Thermotechnical Department of the Institute of Power Engineering of the ESSR Academy of Sciences with special apparatus as described in Figure 1. The results obtained were compared with those of other scientists; the analytical solutions found by G.N. Abramovich, L.A. Vulis and T.P. Leont'yeva were almost identical.
There are 7 graphs, 2 tables, 1 diagram, and 2 Soviet references.

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A Study of the Development of a Jet in a Co-Stream 23-58-2-6/9

ASSOCIATION: Institut energetiki Akademii nauk Estonskoy SSR (Institute of Power Engineering of the Academy of Sciences of the Estonian SSR)

SUBMITTED: Jan 21, 1958

Card 2/2 1. Jets - Velocity 2. Jets - Properties - Testing equipment
3. Jets - Properties - Test results

IVANOV, Yu.V.; SUY, Kh.N.; TIMMA, E.P.

Turbulent isothermal jet in a general stream. Inzh.-fiz.zhur. no.5: 3-10 My '58. (MIRA 12:1)

1. Institut energetiki AN ESSR, g. Tallinn.
(Fluid dynamics)

IVANOV, Yu.V.

Techniques of the design of forced gas burners. Gaz. prom. no.8:20-27 Ag '58. (MIRA 11:8)
(Gas burners)

IVANOV, Yu.V., kand.tekhn.nauk

Methods of designing mixers for combustion chambers of gas turbines. Energomashinostroenie 4 no.11:8-12 N '58.
(Gas turbines--Design) (MIRA 11:11)